

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for processing shared sub-packets in a communication system, the method comprising:

generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising a variable number of sub-slots including at least a first set of sub-slots and a second set of sub-slots, the first set of sub-slots comprising a first data transmission assigned to a first subscriber station, the second set of sub-slots comprising a second data transmission assigned to a second subscriber station, the second data transmission different than the first data transmission, and (b) parameters of the shared sub-packet of the traffic channel including a variable number of subscriber stations sharing the sub-packet of the traffic channel; and

generating at least one second control channel only if the sub-packet is shared, the number of second control channels equal to the variable number of subscriber stations sharing the sub-packet of the traffic channel, each of said at least one second control channel comprising (a) an identity of at least one subscriber station intended to share the sub-packet and (b) information enabling the subscriber station to demodulate the traffic channel.

2. (Currently Amended) The method as claimed in claim 1, wherein said parameters of the traffic channel comprise:

~~a~~ the number of subscriber stations sharing the sub-packet of the traffic channel.

3. (Previously Presented) The method as claimed in claim 2, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a number of code channels encoding the shared sub-packet of the traffic channel.

4. (Previously Presented) The method as claimed in claim 1, further comprising:

transmitting the first control channel at a power required by a subscriber station with a worst forward link quality metric among a plurality of subscriber stations for which the first control channel is intended.

5. (Previously Presented) The method as claimed in claim 1, further comprising:

transmitting each of the at least one second control channel at a minimum power required by a subscriber station for which the at least one second control channel is intended.

6. (Previously Presented) The method as claimed in claim 1, wherein said parameters of the traffic channel comprise:

a first number of sub-divisions of the sub-packet of the traffic channel, and a second number of subscriber stations sharing the sub-packet.

7. (Previously Presented) The method as claimed in claim 6, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a starting sub-division of the sub-packet of the traffic channel for the subscriber station.

8. (Previously Presented) A method for processing shared sub-packets at a first subscriber station, the method comprising:

at the first subscriber station, demodulating a first control channel to determine whether a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations;

if the sub-packet of the traffic channel is to be shared, determining a number of subscriber stations sharing the sub-packet of the traffic channel and multiplexing of the traffic channel in accordance with said demodulated first control channel;

demodulating a second control channel comprising (a) an identity of a subscriber station intended to share the sub-packets and (b) information enabling the subscriber station intended to share the sub-packets to demodulate the traffic channel; and

if the subscriber station identity of the second control channel matches the identity of the first subscriber station, demodulating the traffic channel in accordance with said determined multiplexing and the enabling information.

9. (Previously Presented) The method as claimed in claim 8, further comprising:

if the subscriber station identity of the second control channel does not match the identity of the first subscriber station and a third control channel is transmitted, demodulating for the third control channel.

10. (Previously Presented) The method as claimed in claim 8, wherein said demodulating a first control channel to determine whether the sub-packet of the traffic channel is to be shared comprises:

demodulating a pre-determined forward packet data control channel.

11. (Previously Presented) The method as claimed in claim 8, wherein said demodulating the traffic channel in accordance with said determined multiplexing and the enabling information comprises:

determining a size of traffic channel unit and a number of code channels in accordance with the enabling information if the traffic channel unit is code multiplexed; and

demodulating the sub-packet.

12. (Previously Presented) The method as claimed in claim 8, wherein said demodulating the traffic channel in accordance with the enabling information comprises:

determining a number of sub-divisions of the sub-packet and a starting sub-division in accordance with the enabling information if the sub-packet is time multiplexed; and

demodulating the sub-packet.

13. (Previously Presented) A method for processing shared sub-packets in a communication system, the method comprising:

generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations and (b) parameters of the shared sub-packet of the traffic channel;

generating at least one second control channel, each of said at least one second control channel comprising (a) an identity of at least one subscriber station intended to share the sub-packet and (b) information enabling the subscriber station to demodulate the traffic channel;

transmitting the control channels;

at a first subscriber station, demodulating the received first control channel;

determining a number of subscriber stations sharing the sub-packet of the traffic channel and multiplexing of the traffic channel in accordance with said demodulated control channel;

demodulating a second control channel comprising (a) an identity of a subscriber station and (b) information enabling the subscriber station intended to share the sub-packet to demodulate the traffic channel; and

if the subscriber station identity of the second control channel matches an identity of the first subscriber station, demodulating the traffic channel in accordance with said determined multiplexing and the enabling.

14. (Previously Presented) The method as claimed in claim 13, wherein said parameters of the traffic channel comprise:

a number of subscriber stations sharing the sub-packet of the traffic channel.

15. (Previously Presented) The method as claimed in claim 14, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a number of code channels encoding shared sub-packet of the traffic channel.

16. (Previously Presented) The method as claimed in claim 13, further comprising:

transmitting the first control channel at a power required by a subscriber station with a worst forward link quality metric among a plurality of subscriber stations for which the first control channel is intended.

17. (Previously Presented) The method as claimed in claim 13, further comprising:

transmitting each of the at least one second control channel at a minimum power required by a subscriber station for which the at least one second control channel is intended.

18. (Previously Presented) The method as claimed in claim 13, wherein said parameters of the traffic channel comprise:

a first number of sub-divisions of the sub-packet of the traffic channel, and a second number of subscriber stations sharing the sub-packet.

19. (Previously Presented) The method as claimed in claim 18, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a starting sub-division of the sub-packet of the traffic channel for the subscriber station.

20. (Previously Presented) The method as claimed in claim 13, further comprising:

if the subscriber station identity of the second control channel does not match the identity of the first subscriber station and a third control channel is transmitted demodulating the third control channel.

21. (Previously Presented) The method as claimed in claim 13, wherein said demodulating a first control channel to determine whether the sub-packet of the traffic channel is to be shared comprises:

demodulating a pre-determined forward packet data control channel.

22. (Previously Presented) The method as claimed in claim 15, wherein said demodulating the traffic channel in accordance with said determined multiplexing and the enabling information comprises:

determining a size of traffic channel unit and a number of code channels in accordance with the enabling information if the traffic channel unit is code multiplexed; and

demodulating the traffic channel unit.

23. (Previously Presented) The method as claimed in claim 18, wherein said demodulating the traffic channel in accordance with the enabling information comprises:

determining a number of sub-divisions of the sub-packet and a starting sub-division in accordance with the enabling information if the sub-packet is time multiplexed; and

demodulating the traffic channel sub-packet.

24. (Previously Presented) The method of claim 1, wherein two sub-slots include data intended for two subscriber stations.

25. (Previously Presented) The method of claim 1, wherein X number of sub-slots include data intended for a first subscriber station, Y number of sub-slots including data intended for a second subscriber station, and X is different from Y.

26. (Previously Presented) The method of claim 10, wherein demodulating a first control channel to determine whether the sub-packet of the traffic channel is to be shared further comprises comparing a subscriber station identity block of the pre-determined forward packet data control channel with a reserved value.

Please add the following claims:

27. (Previously Presented) A method for processing shared sub-packets in a communication system, the method comprising:

generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising at least two sub-slots, and (b) parameters of the shared sub-packet of the traffic channel; and

generating at least one second control channel, each of said at least one second control channel comprising (a) an identity of at least one subscriber station intended to share the sub-packet and (b) information enabling the subscriber station to demodulate the traffic channel;

wherein the first control channel is configured to be received by a first subscriber station configured to demodulate the first control channel to determine whether a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations and if the sub-packet of the traffic channel is to be shared, a number of subscriber stations sharing the sub-packet of the traffic channel is determined and the traffic channel demultiplexed in accordance with said demodulated first control channel;

and further wherein the second control channel is configured to be received and demodulated and comprises (a) an identity of a subscriber station intended to share the sub-packets and (b) information enabling the subscriber station intended to share the sub-packets to demodulate the traffic channel; and

if the subscriber station identity of the second control channel matches the identity of the first subscriber station, the traffic channel is configured to be received and demodulated in accordance with said determined multiplexing and the enabling information.

28. (Previously Presented) The method as claimed in claim 27, wherein said parameters of the traffic channel comprise:

a number of subscriber stations sharing the sub-packet of the traffic channel.

29. (Previously Presented) The method as claimed in claim 28, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a number of code channels encoding the shared sub-packet of the traffic channel.

30. (Previously Presented) The method as claimed in claim 27, further comprising:

transmitting the first control channel at a power required by a subscriber station with a worst forward link quality metric among a plurality of subscriber stations for which the first control channel is intended.

31. (Previously Presented) The method as claimed in claim 27, further comprising:

transmitting each of the at least one second control channel at a minimum power required by a subscriber station for which the at least one second control channel is intended.

32. (Previously Presented) The method as claimed in claim 27, wherein said parameters of the traffic channel comprise:

a first number of sub-divisions of the sub-packet of the traffic channel, and a second number of subscriber stations sharing the sub-packet.

33. (Previously Presented) The method as claimed in claim 32, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a starting sub-division of the sub-packet of the traffic channel for the subscriber station.

34. (Currently Amended) A communication device comprising:

a base station configured to generate a first control channel and at least one second control channel, wherein the first control channel comprises:

an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising a variable number of sub-slots including at least a first and second sub-slot, the first sub-slot comprising a first data transmission, the second sub-slot comprising a second data transmission different than the first data transmission, and

parameters of the shared sub-packet of the traffic channel including a variable number of subscriber stations sharing the sub-packet of the traffic channel;

and further wherein the at least one second control channel is generated only if the sub-packet is shared, the number of second control channels equal to the variable number of subscriber stations sharing the sub-packet of the traffic channel, wherein the at least one second control channel comprises :

an identity of at least one subscriber station intended to share the sub-packet; and
information enabling the subscriber station to demodulate the traffic channel.

35. (Currently Amended) The communication device as claimed in claim 34, wherein said parameters of the traffic channel comprise:

a the number of subscriber stations sharing the sub-packet of the traffic channel.

36. (Previously Presented) The communication device as claimed in claim 35, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a number of code channels encoding the shared sub-packet of the traffic channel.

37. (Previously Presented) The communication device as claimed in claim 34, wherein the first control channel is provided at a power required by a subscriber station with a worst forward link quality metric among a plurality of subscriber stations for which the first control channel is intended.

38. (Previously Presented) The communication device as claimed in claim 34, wherein at least one second control channel is provided at a minimum power required by a subscriber station for which the at least one second control channel is intended.

39. (Previously Presented) The communication device as claimed in claim 34, wherein said parameters of the traffic channel comprise:

a first number of sub-divisions of the sub-packet of the traffic channel, and a second number of subscriber stations sharing the sub-packet.

40. (Previously Presented) The communication device as claimed in claim 39, wherein said information enabling the subscriber station to demodulate the traffic channel comprises:

a starting sub-division of the sub-packet of the traffic channel for the subscriber station.

41. (Previously Presented) A communication apparatus comprising:

a first subscriber station configured to process shared sub-packets and demodulate a first control channel to determine whether a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations;

wherein if the sub-packet of the traffic channel is to be shared, the number of subscriber stations sharing the sub-packet of the traffic channel is determined and the traffic channel is multiplexed in accordance with said demodulated first control channel;

further wherein the first subscriber station is configured to demodulate a second control channel comprising (a) an identity of a subscriber station intended to share the sub-packets and (b) information enabling the subscriber station intended to share the sub-packets to demodulate the traffic channel; and

if the subscriber station identity of the second control channel matches the identity of the first subscriber station, the first subscriber station demodulates the traffic channel in accordance with said multiplexing and the enabling information.

42. (Previously Presented) The communication apparatus as claimed in claim 41, further comprising:

if the subscriber station identity of the second control channel does not match the identity of the first subscriber station and a third control channel is transmitted, demodulating for the third control channel.

43. (Previously Presented) The communication apparatus as claimed in claim 41, wherein the first subscriber station demodulating the first control channel to determine whether the sub-packet of the traffic channel is to be shared comprises:

the first subscriber station demodulating a pre-determined forward packet data control channel.

44. (Previously Presented) The communication apparatus as claimed in claim 41, wherein the first subscriber station demodulating the traffic channel in accordance with said multiplexing and the enabling information comprises:

determining a size of traffic channel unit and a number of code channels in accordance with the enabling information if the traffic channel unit is code multiplexed; and

demodulating the sub-packet.

45. (Previously Presented) The communication apparatus as claimed in claim 41, wherein the first subscriber station demodulating the traffic channel in accordance with the enabling information comprises:

determining a number of sub-divisions of the sub-packet and a starting sub-division in accordance with the enabling information if the sub-packet is time multiplexed; and

demodulating the sub-packet.

46. (Currently Amended) An apparatus configured to process shared sub-packets in a communication system, comprising:

means for generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising a varying amount of sub-slots including at least a first and second sub-slots, the first sub-slot comprising a first data transmission, the second sub-slot comprising a second data transmission different than the first data transmission, and (b) parameters of the shared sub-packet of the traffic channel including a varying amount of subscriber stations sharing the sub-packet of the traffic channel; and

means for generating at least one second control channel only if the sub-packet is shared, the amount of second control channels generated equal to the varying amount of subscriber stations sharing the sub-packet of the traffic channel, each of said at least one second control channel comprising (a) an identity of at least one subscriber station intended to share the sub-packet and (b) information enabling the subscriber station to demodulate the traffic channel.

47. (Previously Presented) An apparatus configured to process shared sub-packets, comprising:

means for demodulating a first control channel to determine whether a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations;

means for determining a number of subscriber stations sharing the sub-packet of the traffic channel and multiplexing of the traffic channel in accordance with said demodulated first control channel if the sub-packet of the traffic channel is to be shared,;

means for demodulating a second control channel comprising (a) an identity of a subscriber station intended to share the sub-packets and (b) information enabling the subscriber station intended to share the sub-packets to demodulate the traffic channel; and

means for demodulating the traffic channel in accordance with said determined multiplexing and the enabling information if the subscriber station identity of the second control channel matches the identity of a first subscriber station.

48. (Currently Amended) A computer readable medium ~~comprising~~ encoded with computer executable instructions, wherein the instructions are executable by a computer processor and adapted configured to perform a method comprising:

generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising a variable amount of sub-slots including at least a first and second sub-slot, the first sub-slot comprising a first data transmission, the second sub-slot comprising a second data transmission different than the first data transmission, and (b) parameters of the shared sub-packet of the traffic channel including a variable amount of subscriber stations sharing the sub-packet of the traffic channel; and

generating at least one second control channel only if the sub-packet is shared, the amount of second control channels generated equal to the variable amount of subscriber stations sharing the sub-packet of the traffic channel, each of said at least one second control channel

comprising (a) an identity of at least one subscriber station intended to share the sub-packet and (b) information enabling the subscriber station to demodulate the traffic channel.

49. (Currently Amended) A computer readable medium ~~comprising~~ encoded with computer executable instructions, wherein the instructions are executable by a computer processor and ~~adapted~~ configured to perform a method comprising:

demodulating a first control channel to determine whether a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations;

determining a number of subscriber stations sharing the sub-packet of the traffic channel and multiplexing of the traffic channel in accordance with said demodulated first control channel if the sub-packet of the traffic channel is to be shared,;

demodulating a second control channel comprising (a) an identity of a subscriber station intended to share the sub-packets and (b) information enabling the subscriber station intended to share the sub-packets to demodulate the traffic channel; and

demodulating the traffic channel in accordance with said determined multiplexing and the enabling information if the subscriber station identity of the second control channel matches the identity of a first subscriber station.